

**AMENDMENTS TO THE CLAIMS**

Please cancel claims 15, 17, and 53.

Please amend claim 16 as shown in the following list of claims.

1. (Previously Presented) An isolated polynucleotide coding for a ferroportin 1 polypeptide comprising SEQ ID NO:2, wherein the glycine at position 80 of SEQ ID NO:2 is substituted with a serine.
- 2-3. (Canceled).
4. (Previously Presented) The isolated polynucleotide according to claim 1 comprising SEQ ID NO:1, wherein nucleotide 238 of SEQ ID NO:1 is A.
- 5-10. (Canceled).
11. (Previously Presented) The isolated polynucleotide according to claim 1, wherein said isolated polynucleotide is genomic DNA.
12. (Previously Presented) The isolated polynucleotide according to claim 1, wherein said isolated polynucleotide is mRNA.
13. (Previously Presented) The isolated polynucleotide according to claim 1, wherein said isolated polynucleotide is cDNA.
14. (Previously Presented) The isolated polynucleotide coding for a mutated ferroportin 1 according to claim 1, wherein the nucleotide sequence of said isolated polynucleotide is SEQ ID NO:3.
15. (Canceled).

16. (Currently Amended) ~~The~~ An isolated polynucleotide ~~according to claim 15 further comprising more than 10 consecutive nucleotides of SEQ ID NO:3, wherein the isolated polynucleotide comprises position 238 of SEQ ID NO:3 and comprises at least one of the oligonucleotide sequences of SEQ ID NO: 13 or 14.~~

17. (Canceled).

18. (Previously Presented) The isolated polynucleotide according to claim 1 comprising a label.

19. (Previously Presented) A recombinant vector comprising the isolated polynucleotide according to claim 1.

20. (Previously Presented) An isolated cell transfected or transformed with the recombinant vector according to claim 19.

21. (Previously Presented) A eukaryotic cell, tissue or non-human animal including a transgene, wherein such transgene is at least one isolated polynucleotide according to claim 1.

22-49. (Canceled).

50. (Previously Presented) A kit for the non-HFE hereditary Hemochromatosis diagnosis comprising the isolated polynucleotide according to claim 1.

51. (Previously Presented) A kit for hereditary impaired iron homeostasis diagnosis comprising the isolated polynucleotide according to claim 1.

52. (Previously Presented) A kit for detecting a polymorphism selected from the group consisting of: polymorphism of nucleotide position 238 of SEQ ID NO: 1 comprising at least

one of the oligonucleotides of sequence: SEQ ID NO: 13, or 14 optionally in combination with TspR1 restriction enzyme.

53. (Canceled).